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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,186	01/26/2004	Toru Tsukada	Q79580	6504
23373	7590	07/25/2006		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER KIM, CHONG HWA	
			ART UNIT 3682	PAPER NUMBER

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,186	<b>Applicant(s)</b> TSUKADA ET AL.	
	<b>Examiner</b> Chong H. Kim	<b>Art Unit</b> 3682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson, U.S. Patent 3,643,521 in view of Chiba, JP 04046216 A.

Nilsson shows, in Fig. 2, a feed screw device comprising;

a screw shaft 10;

a nut member 11 threadably engaging an outer peripheral surface of the screw shaft;

a lubricant supply device 17, at least a portion 18 of the lubricant supply device

contacting the screw shaft;

a housing member 22 which is secured to the nut member and houses the lubricant supply device, the nut member being positioned outside of the housing member;

wherein the housing member/retaining ring, comprising a cylindrical portion 27 that extends away from the nut member and an end face (the vertical portion of 22) that covers an axial end (the right side end) of the lubricant supply device, is disposed to project from an axial

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end surface of the nut member and along an outer circumferential surface of the lubricant supply device, the outer circumferential surface extending in a longitudinal direction of the screw shaft and beyond the end face of the nut member;

wherein the portion 18 of the lubricant supply device contacts a threaded groove of the screw shaft;

a means (screw) for securing the housing to the nut member; and

wherein the means for securing comprises a screw/fastener threaded to contact at least a portion of the nut member and into at least a portion of the housing;

but fails to show a side that extends radially inward to cover the axial end portion of the lubricant supply device and the lubricant supply device containing a lubricant.

Chiba shows, in Fig. 1, a housing member 8 and 9 which is secured to a nut member 2 and houses a lubricant supply device 7 containing a lubricant oil, the nut member being positioned outside of the housing member, wherein the housing member includes a side 9 that extends radially inward to cover an axial end portion of the lubricant supply device, the axial end portion of the lubricant supply device faces in the longitudinal direction away from the nut member.

As to the structure of the housing member, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the housing member of Nilsson with the capped housing member as taught by Chiba in order to further protect the lubricant supply device from separating from the nut member so that the feed screw device would last longer.

As to the lubricant supply device containing a lubricant, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the sealing member of Nilsson with the oil containing lubricant supply device as taught by Chiba in order to simplify the recharging of the lubricant so that the cost of maintenance can be reduced.

4. Claims 17-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson, U.S. Patent 3,643,521 in view of Yabe et al., U.S. Patent 5,678,927.

Nilsson shows, in Fig. 2, a feed screw device comprising;

- a screw shaft 10;
- a nut member 11 threadably engaging an outer peripheral surface of the screw shaft;
- a lubricant supply device 17, at least a portion 18 of the lubricant supply device contacting the screw shaft;
- a housing member 22 which is secured to the nut member and houses the lubricant supply device, the nut member being positioned outside of the housing member;
- wherein the housing member/retaining ring, comprising a cylindrical portion 27 that extends away from the nut member and an end face (the vertical portion of 22) that covers an axial end (the right side end) of the lubricant supply device, is disposed to project from an axial end surface of the nut member and along an outer circumferential surface of the lubricant supply device, the outer circumferential surface extending in a longitudinal direction of the screw shaft and beyond the end face of the nut member;
- wherein the portion 18 of the lubricant supply device contacts a threaded groove of the screw shaft;

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a means (screw) for securing the housing to the nut member; and

wherein the means for securing comprises a screw/fastener threaded to contact at least a portion of the nut member and into at least a portion of the housing;

but fails to show a side that extends radially inward to cover the axial end portion of the lubricant supply device and the lubricant supply device containing a lubricant.

Yabe et al. shows, in Figs. 4-11, a housing member 41 which is secured to a nut member 2 and houses a lubricant supply device 42 containing a lubricant oil, the nut member being positioned outside of the housing member, wherein the housing member includes a side 43b that extends radially inward to cover an axial end portion of the lubricant supply device, the axial end portion of the lubricant supply device faces in the longitudinal direction away from the nut member.

As to the structure of the housing member, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the housing member of Nilsson with the capped housing member as taught by Yabe et al. in order to further protect the lubricant supply device from separating from the nut member so that the feed screw device would last longer.

As to the lubricant supply device containing a lubricant, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the sealing member of Nilsson with the oil containing lubricant supply device as taught by Yabe et al. in order to simplify the recharging of the lubricant so that the cost of maintenance can be reduced.

5. Claims 17-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson, U.S. Patent 3,643,521 in view of Asai et al., U.S. Patent 5,501,526.

Nilsson shows, in Fig. 2, a feed screw device comprising;

- a screw shaft 10;
- a nut member 11 threadably engaging an outer peripheral surface of the screw shaft;
- a lubricant supply device 17, at least a portion 18 of the lubricant supply device contacting the screw shaft;
- a housing member 22 which is secured to the nut member and houses the lubricant supply device, the nut member being positioned outside of the housing member;
- wherein the housing member/retaining ring, comprising a cylindrical portion 27 that extends away from the nut member and an end face (the vertical portion of 22) that covers an axial end (the right side end) of the lubricant supply device, is disposed to project from an axial end surface of the nut member and along an outer circumferential surface of the lubricant supply device, the outer circumferential surface extending in a longitudinal direction of the screw shaft and beyond the end face of the nut member;
- wherein the portion 18 of the lubricant supply device contacts a threaded groove of the screw shaft;
- a means (screw) for securing the housing to the nut member; and
- wherein the means for securing comprises a screw/fastener threaded to contact at least a portion of the nut member and into at least a portion of the housing;
- but fails to show a side that extends radially inward to cover the axial end portion of the lubricant supply device and the lubricant supply device containing a lubricant.

Asai et al. shows, in Fig. 13(a), a housing member 1 which is capable of being secured to a nut member, housing a lubricant supply device 3 containing a lubricant oil, wherein the housing member includes a side 1a that extends radially inward to cover an axial end portion of the lubricant supply device.

As to the structure of the housing member, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the housing member of Nilsson with the capped housing member as taught by Asai et al. in order to further protect the lubricant supply device from separating from the nut member so that the feed screw device would last longer.

As to the lubricant supply device containing a lubricant, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the sealing member of Nilsson with the oil containing lubricant supply device as taught by Asai et al. in order to simplify the recharging of the lubricant so that the cost of maintenance can be reduced.

#### ***Response to Arguments***

6. Applicant's arguments, see Remarks, filed Jun 22, 2006, with respect to the rejection(s) of claim(s) 17-47 under Yabe et al. for US Pat. 6,004,039 and JP 9-14452 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chiba, JP 04046216 A; Yabe et al., U.S. Patent 5,678,927; and Asai et al., U.S. Patent 5,501,526.



***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Monday - Friday; 6:00 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

chk  
July 24, 2006



CHONG H. KIM  
PRIMARY EXAMINER